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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,825	03/22/2004	Kishio Yokouchi	073338.0494	1490
5073 7590 05/22/2008 BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980				
EXAMINER				
SONG, SARAH U				
ART UNIT		PAPER NUMBER		
2874				
NOTIFICATION DATE		DELIVERY MODE		
05/22/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomail1@bakerbotts.com
glenda.orrantia@bakerbotts.com

Office Action Summary

Application No.

10/805,825

Applicant(s)

YOKOUCHI, KISHIO

Examiner

Sarah Song

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-12 and 33-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-12,33-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant is advised that the Notice of Allowance mailed January 30, 2008 is vacated. If the issue fee has already been paid, applicant may request a refund or request that the fee be credited to a deposit account. However, applicant may wait until the application is either found allowable or held abandoned. If allowed, upon receipt of a new Notice of Allowance, applicant may request that the previously submitted issue fee be applied. If abandoned, applicant may request refund or credit to a specified Deposit Account.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1, 2, 5-12, 33, 34 and 36-43 are rejected under 35 U.S.C. 102(e) as being anticipated by Glebov et al. (U.S. Patent 7,092,603 newly cited).**

4. The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

5. Regarding claims 1 and 33, Glebov et al. discloses an apparatus for transmitting light (Figure 2) comprising: a first substrate/optical circuit board (101) having a first surface (111) including at least one optically active area (113); a second substrate (103) having a second surface (201) positioned in opposing spaced apart relationship from the first surface (111; see column 6, lines 10-17 and 40-56); wherein the second surface contains at least one second optically active area (213) opposing the at least one first optically active area (113); where the second substrate (103) is supported substantially by the first substrate (101); a polymer layer (200) disposed between the first and second substrate; a waveguide disposed within the polymer layer (the polymer material layer forms the waveguide) between the first and second optically active areas on the first and second surfaces; wherein the waveguide comprises a polymer core and a cladding for transmitting light therebetween (the core is polymer and the cladding may be air or a lower index refractive material; see column 7, lines 5-9).
6. Regarding claims 2 and 34, the cladding may comprise a second polymer, and the first polymer is a photosensitive polymer (i.e. UV-curable polymer; see column 7, lines 5-9 and paragraph spanning columns 8 and 9).
7. Regarding claims 5 and 36, each of the first and second substrates comprise a plurality of optically active areas (see Figure 2).
8. Regarding claims 6 and 37, A space between said first and second substrates is substantially filled with polymeric material (bridge 200 and underfill 407; see column 7, lines 60-62 and Figures 4A and 7C).
9. Regarding claims 7 and 38, one or more additional structures (211) embedded within said polymeric material.

10. Regarding claims 8 and 39, the first and second surfaces are substantially parallel and spaced apart by a distance which is in the range of about 0.02 mm to about 0.15 mm (see paragraph spanning columns 9 and 10).
11. Regarding claims 9 and 40, the second substrate (103) is an IC (OEIC; column 5, line 22).
12. Regarding claims 10 and 41, the second substrate may also be a waveguide daughter board (see column 5, lines 6-9).
13. Regarding claims 11, 12, 42 and 43, one of said optically active areas comprises a photodiode or a semiconductor laser (column 5, lines 6).
14. **Claims 1, 2, 6, 11, 33, 34, 37 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshimura et al. (U.S. Patent 5,835,646 previously cited).**
15. Regarding claims 1 and 33, Yoshimura et al. discloses an apparatus for transmitting light (Figure 25) comprising: a first substrate/optical circuit board having a first surface including at least one optically active area; a second substrate having a second surface positioned in opposing spaced apart relationship from the first surface; wherein the second surface contains at least one second optically active area opposing the at least one first optically active area; where the second substrate is supported substantially by the first substrate; a polymer layer (photorefractive index polymer) disposed between the first and second substrate; a waveguide disposed within the polymer layer (the polymer material layer forms the waveguide) between the first and second optically active areas on the first and second surfaces; wherein the waveguide comprises a polymer core and a cladding for transmitting light therebetween (see column 11, lines 36-62).

16. Regarding claims 2 and 34, the cladding comprises a second polymer (portion having refractive index not increased by light irradiation), and said first polymer is a photosensitive polymer (refractive index increased by light irradiation, column 11, lines 49-50)
17. Regarding claims 6 and 37, the space between said first and second substrates is substantially filled with polymeric material (see Figure 25).
18. Regarding claims 11 and 42, at least one of said optically active areas comprises a photodiode (PD).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. **Claims 3 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura et al. as applied to claim 2 or 34 as applicable above, and further in view of (Oh et al., U.S. Patent 6,303,040 newly cited).**
21. Regarding claims 3 and 35, Yoshimura et al. discloses fluorinated polymer waveguides (column 9, lines 26-27), but does not expressly disclose the first polymer to comprise a fluorinated polymer.
22. Oh et al. discloses that fluorinated polymers are advantageous for low loss at 1550 nm wavelength, commonly used in optical communications (column 3, lines 25-28).
23. One of ordinary skill in the art would have been motivated to provide a fluorinated polymer for the first polymer of Yoshimura et al. in order to provide a low loss device for

efficient optical transmission. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a fluorinated first polymer in the device of Yoshimura et al. as taught by Oh et al.

Response to Arguments

24. Applicant's arguments with respect to claims 1-3, 5-12 and 33-43 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Song whose telephone number is 571-272-2359. The examiner can normally be reached on M-Th 7:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sarah Song/

Art Unit: 2874

Sarah Song
Primary Examiner
Art Unit 2874